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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/966,121	09/28/2001	J. G. Walacavage	200-0667	4437

7590

06/28/2005

Daniel H. Bliss  
Bliss McGlynn P.C.  
Suite 600  
2075 West Big Beaver Road  
Troy, MI 48084

EXAMINER

GEBRESILASSIE, KIBROM K

ART UNIT

PAPER NUMBER

2128

DATE MAILED: 06/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/966,121

Applicant(s)

WALACAVAGE ET AL.

Examiner

Kibrom K. Gebresilassie

Art Unit

2128

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09/28/2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. This action is responsive to the application filed September 28, 2001.
2. Claims 1-19 are examined.

#### ***Priority***

3. The priority date considered for this application is September 28, 2000.

#### ***Oath/Declaration***

4. The office acknowledges receipt of a properly signed oath/declaration filed September 28, 2001.

#### ***Drawings***

5. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: **32**. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1-19 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,442,441 issued to Walacavage.

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

**As per Claim 1:**

Walacavage discloses a method of emulating machine tool behavior for a programmable logic controller logical verification system for manufacturing a motor vehicle, said method comprising the steps of:

constructing a mechanical model (workcell model; col. 3 line 25);

viewing motion of the mechanical model in a motion viewer(VisLine; Fig.

2 element 40);

determining whether the motion of the mechanical model is acceptable  
(col. 3 lines 59-65);

replicating the motion previously defined with PLC code if the motion of  
the mechanical model was acceptable( col. 4 lines 30-36); and

using the accepted motion of the mechanical model to compare the  
behavior of the PLC code relative to the accepted motion (col. 4 lines 57-58).

**As per Claim 2:**

Walacavage discloses a method as set forth in claim 1 wherein said of  
constructing comprises using a mechanical tool design system (fixture design system  
and workcell design system; col. 2 lines 28-31) to construct the mechanical model  
(workcell model; col. 3 line 25).

**As per Claim 3:**

Walacavage discloses a method as set forth in claim 2 including the steps of  
constructing an electromechanical model (control model; col. 2 lines 54-57).

**As per Claim 4:**

Walacavage discloses a method as set forth in claim 3 wherein said step of  
constructing the mechanical model (workcell model; col. 3 line 25) includes binding the  
electromechanical model to the mechanical model (col. 3 lines 27- 32).

**As per Claim 5:**

Walacavage discloses a method as set forth in claim 4 wherein said step of  
constructing the electromechanical model comprises using a PLC logical verification

system to construct the electromechanical model (Abstract).

**As per Claim 6:**

Walacavage discloses a method as set forth in claim 1 including the step of generating transformational arrays based on computer aid design (CAD) (CAD tooling models; col. 4 line 37) geometries of the mechanical model (workcell model; col. 3 line 25).

**As per Claim 7:**

Walacavage discloses a method as set forth in claim 6 including the step of exporting the mechanical model to a control system design system (neutral control model file; col. 3 lines 23-25).

**As per Claim 8:**

Walacavage discloses a method as set forth in claim 7 including the step of constructing a motion file based on the mechanical model and transformational arrays (col. 4 lines 30-39).

**As per Claim 9:**

Walacavage discloses a method as set forth in claim 8 wherein said step of displaying further comprises playing the motion file by motion player (VisLine; Fig. 2 element 40).

**As per Claim 10:**

Walacavage discloses a method as set forth in claim 8 including the step of returning to the mechanical tool design system if the motion of the mechanical model is

not acceptable (col. 3 lines 65-67).

**As per Claim 11:**

The limitation of claim 11 has already been discussed in the rejection of claims 1, 6, and 8. It is therefore rejected under the same rationale.

**As per Claim 12:**

The limitation of claim 12 has already been discussed in the rejection of claim 2. It is therefore rejected under the same rationale.

**As per Claim 13:**

The limitation of claim 13 has already been discussed in the rejection of claim 3. It is therefore rejected under the same rationale.

**As per Claim 14:**

The limitation of claim 14 has already been discussed in the rejection of claim 4. It is therefore rejected under the same rationale.

**As per Claim 15:**

The limitation of claim 15 has already been discussed in the rejection of claim 5. It is therefore rejected under the same rationale.

**As per Claim 16:**

The limitation of claim 16 has already been discussed in the rejection of claim 6. It is therefore rejected under the same rationale.

**As per Claim 17:**

Walacavage discloses a method as set forth in claim 11 including the step of exporting the mechanical model to a PLC emulator (col. 4 lines 6-9).

**As per Claim 18:**

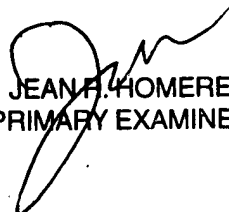
The limitation of claim 18 has already been discussed in the rejection of claim 9. It is therefore rejected under the same rationale.

**As per Claim 19:**

The limitation of claim 19 has already been discussed in the rejection of claim 10. It is therefore rejected under the same rationale.

***Conclusion***

1. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
2. Any inquiring concerning this communication or earlier communication from the examiner should be directed to Kibrom K. Gebresilassie whose telephone number is (571) 272-8571. The examiner can normally be reached on Monday-Friday, 8:30 am to 4:30 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner supervisor, Jean R. Homere can be reached at (571) 272-3780. The official fax number is (703) 872-9306. Any inquiring of a general nature relating to the status of this application should be directed to the group receptionist whose telephone number is (571) 272-3700.

  
JEAN R. HOMERE  
PRIMARY EXAMINER